Prevent, Mitigate, and Recover (PMR) Insight Collective Knowledge System (PICK)

CRC Document

Version 1.4

3/6/2020

**Document Control**

**Approval**

The Guidance Team and the customers shall approve this document.

**Document Change Control**

|  |  |
| --- | --- |
| Initial Release: | 1.0 |
| Current Release: | 1.4 |
| Indicator of Last Page in Document: | $ |
| Date of Last Review: | 3/6/2020 |
| Date of Next Review: | 3/8/2020 |
| Target Date for Next Update: | 3/8/2020 |

**Distribution List**

This following list of people shall receive a copy of this document every time a new version of this document becomes available:

Guidance Team Members:

Steven Roach

Customer:

Dr. Oscar Perez

Vincent Fonseca

Herandy Denisse Vazquez

Baltazar Santaella

Florencia Larsen

Erick De Nava

Software Team Members:

Mark Williams

Valente Arellano

Joseph Warren

TJ Haddad

Ivan Torres

**Change Summary**

The following table details changes made between versions of this document

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Modifier | Description |
| 1.0 | 2/18/2020 | All team members | Completed and merged CRC cards for all classes |
| 1.1 | 2/21/2020 | Mark Williams | Updated document formatting |
| 1.2 | 2/25/2020 | Joseph Warren | Updated document formatting |
| 1.3 | 2/28/2020 | All team members | Finished CRC |
| 1.4 | 3/6/2020 | Mark Williams | Fix CRC based on feedback |

Table of Contents

[**1. Introduction**](#_heading=h.1t3h5sf) **1**

[**2. Classes**](#_heading=h.wbipmtc6vm9s) **1**

[**3. Responsibilities**](#_heading=h.wzkskoiawok5) **2**

[**4. CRC Cards**](#_heading=h.ojw8x0ibtgii) **5**

[4.1 Event Configuration](#_heading=h.3qp2hgvof7kl) 5

[4.2 Log File](#_heading=h.c2d36ay4jebb) 6

[4.3 Log File Manager](#_heading=h.4ybczeue0873) 6

[4.4 Enforcement Action Report](#_heading=h.wra1v2r7x5s0) 7

[4.5 Enforcement Action Report Manager](#_heading=h.e6ulkkugn7d8) 7

[4.6 Vector](#_heading=h.off8jb9qgyu3) 7

[4.7 Log Entry](#_heading=h.ttm2myiz397k) 8

[4.8 Node](#_heading=h.3tktz3ki9t2x) 8

[4.9 Icon](#_heading=h.sfgngeb0sm7e) 9

[4.10 Graph](#_heading=h.xc36h5bgde35) 9

[4.11 Audio Log File](#_heading=h.j46bptga8q8j) 9

[4.12 Video Log File](#_heading=h.6vaiifdqauzc) 10

[4.13 Relationship](#_heading=h.og9d7dlb4dh0) 10

[4.14 Vector Database](#_heading=h.94a4yatwzq1b) 10

[4.15 Lead Vector Database](#_heading=h.ix597oc6ln61) 11

[4.16 User Vector Database](#_heading=h.f8febsbkh5gq) 11

[4.17 Image Log File](#_heading=h.w07a5emhktqr) 11

[4.18 PDF Log File](#_heading=h.ltws9vbbq7sb) 12

[4.19 Log Entry Manager](#_heading=h.79vqwy7kr7is) 12

[4.20 Icon Manager](#_heading=h.wigis2r6okgn) 13

[4.21 Client Handler](#_heading=h.mmqgz433il1b) 13

[4.22 Server Handler](#_heading=h.m0qxn5sy0es2) 13

[4.23 Event Configuration Window](#_heading=h.xvuhj482krdh) 14

[4.24 Vector Configuration](#_heading=h.4h0nbo5j4ur5) 14

[4.25 Log File Configuration](#_heading=h.odpzkirzgn9o) 14

[4.26 Log Entry Configuration](#_heading=h.jlep75mtxr3i) 14

[4.27 Vector Db Configuration](#_heading=h.pm0qjv7pr4pw) 15

[4.28 Graph Configuration](#_heading=h.gedr0j3vg43u) 15

[4.29 Icon Configuration](#_heading=h.u6srimk56xzx) 15

[4.30 Vector Table Configuration](#_heading=h.o8hxoisd90ti) 15

# 1. Introduction

The purpose of the CRC document is to brief the customers on the classes, responsibilities, and collaborations necessary for the construction of the PICK - the Prevent, Mitigate, and Recover (PMR) Insight Collective Knowledge System (PICK) – tool . Essentially, the PICK tool aims to provide the Lethality, Survivability and HSI directorate (LSH) with the capability of correlating and graphically representing events that have occurred in an Adversarial Assessment (AA).

The CRC document defines the following:

* Classes: Collections of objects that will make up the system.
* Responsibilities: The knowledge or actions of a class
* Collaborations:

The intended audience of the SCM Plan is Dr. Oscar Perez, Mr. Vincent Fonseca, Ms. Herandy Vazquez, Mr. Baltazar Santaella, Ms. Florencia Larsen, Mr. Erick De Nava and the software development team.

# 2. Classes

In this section, we describe all of the *classes* of the PICK tool. They are as follows:

* Event Configuration
* Log File
* Log File Manager
* Enforcement Action Report
* Enforcement Action Report Manager
* Vector
* Log Entry
* Node
* Icon
* Graph
* Audio Log File
* Video Log File
* Relationship
* Vector Database
* Lead Vector Database
* User Vector Database
* Image Log File
* PDF Log File
* Log Entry Manager
* Icon Manager
* Client Handler
* Server Handler
* Event Configuration Window
* Vector Configuration
* Log File Configuration
* Log Entry Configuration
* Vector DB Configuration
* Graph Configuration
* Icon Configuration
* Vector Table Configuration

# 3. Responsibilities

In this section, we describe all of the *responsibilities* the classes of the PICK tool must have. They are as follows:

* Knows the name of the event
* Knows the start timestamp of an event
* Knows the end timestamp of an event
* Knows the path to the root directory of an event
* Knows the name of the red team folder
* Knows the name of the blue team folder
* Knows the name of the white team folder
* Knows whether or not the current user is the lead
* Knows the IP address of the lead
* Knows the number of connections established to the lead
* Can store all event configuration information in a system datastore
* Can validate directory structure
* Can validate directory existence
* Can perform data cleansing
* Can perform data ingestion
* Knows the file name of the log file
* Knows the date and time it was most recently updated
* Knows if the file has been cleansed
* Knows if the file has been validated, and if so, whether it was successful or not
* Knows if the file has been ingested into the system database
* Knows if a user accepts the log file into the system in the event it’s invalid
* Can cleanse a textual log file
* Can validate a textual log file
* Can ingest a textual log file
* Knows all log files created.
* Can create a new log file
* Can modify an existing log file
* Can store a log file in system data store
* Can delete an existing log file
* Knows the line number where an error occurred in a log file
* Knows the error message explaining why a log file fails the validation test
* Can accept invalid log files as valid
* Can reject invalid log files
* Knows all enforcement action reports created
* Can create a new enforcement action report
* Can modify an existing enforcement action report
* Can store an enforcement action report in a data store
* Can delete an existing enforcement action report
* Knows the user-provided name of the vector
* Knows the user-provided description of the vector
* Knows the list of log entries that have been associated with it.
* Knows the list of nodes that make up the vector
* Can create a new node
* Can modify an existing node
* Can delete an existing node
* Knows the list of relationships between nodes in the vector.
* Can create a new relationship
* Can modify an existing relationship
* Can delete an existing relationship
* Can export the vector information in tabular format
* Knows the log entry number
* Knows the log entry timestamp
* Knows the log entry contents
* Knows the host IP address
* Knows the source log file
* Knows the source type
* Knows the node ID
* Knows the node name
* Knows the node timestamp
* Knows the node description
* Knows the log entry reference
* Knows the log entry information of the log entry reference
* Knows the node’s icon information
* Knows the node’s position on the graph
* Knows the visibility of the node’s ID on the graph
* Knows the visibility of the node’s name on the graph
* Knows the visibility of the node’s timestamp on the graph
* Knows the visibility of the node’s description on the graph
* Knows the visibility of the node’s log entry reference on the graph
* Knows the visibility of the node’s event type on a graph
* Knows the visibility of the node’s icon on a graph
* Knows the visibility of the node’s source on a graph
* Knows the node’s visibility on a graph
* Knows the icon name of the icon
* Knows the file path of the icon image
* Knows the list of nodes that make up the graph
* Knows the list of relationships that make up the graph
* Can export the nodes and relationships as an image.
* Can edit the positions of the nodes.
* Can associate nodes together as relationships
* Knows the file name of the file
* Knows the date and time it was most recently updated
* Knows if the file has been cleansed
* Knows if the file has been validated, and if so, whether it was successful or not
* Knows if the file has been ingested into the system database
* Knows if a user accepts the log file into the system in the event it’s invalid
* Can cleanse an audio log file
* Can validate an audio log file
* Can ingest an audio log file
* Knows the file name of the file
* Knows the date and time it was most recently updated
* Knows if the file has been cleansed
* Knows if the file has been validated, and if so, whether it was successful or not
* Knows if the file has been ingested into the system database
* Knows if a user accepts the log file into the system in the event it’s invalid
* Can cleanse a video log file
* Can validate a video log file
* Can ingest a video log file
* Knows the relationship ID of the relationship
* Knows the ID of the parent node of the relationship
* Knows the ID of the child node of the relationship
* Knows the relationship label
* Knows a list of vectors
* Can create a new vector
* Can modify an existing vector
* Can delete an existing vector
* Knows a list of vectors
* Can store vectors in a system datastore
* Can create a new vector
* Can modify an existing vector
* Can delete an existing vector
* Knows a list of pushed vector databases
* Can accept a pushed vector database
* Can reject a pushed vector database
* Can merge an accepted vector database
* Knows a list of vectors
* Can store vectors in a local datastore
* Can create a new vector
* Can modify an existing vector
* Can delete an existing vector
* Can push to the lead vector database
* Can pull from the lead vector database
* Knows the file name of the file
* Knows the date and time it was most recently updated
* Knows if the file has been cleansed
* Knows if the file has been validated, and if so, whether it was successful or not
* Knows if the file has been ingested into the system database
* Knows if a user accepts the log file into the system in the event it’s invalid
* Can cleanse an image log file
* Can validate an image log file
* Can ingest an image log file
* Knows the file name of the file
* Knows the date and time it was most recently updated
* Knows if the file has been cleansed
* Knows if the file has been validated, and if so, whether it was successful or not
* Knows if the file has been ingested into the system database
* Knows if a user accepts the log file into the system in the event it’s invalid
* Can cleanse a PDF log file
* Can validate a PDF image log file
* Can ingest a PDF image log file
* Knows a list of log entries ingested into the system.
* Can create a log entry
* Can delete an existing log entry
* Can store a log entry in a system data store
* Can edit an existing log entry
* Can search through log entries
* Can sort log entries
* Can associate a log entry to a vector
* Knows a list of all icons created
* Can create new icons
* Can delete an existing icon
* Can modify an existing icon
* Can store an icon in a system datastore
* Knows the IP address of the lead machine
* Knows the IP address of the server
* Knows the IP address of a user machine
* Can create a local network connection from the user machine to the lead machine
* Can create a local network connection from the lead machine to the user machine
* Can create a local network connection from the current machine to the server
* Can send data to the lead machine
* Can send data to the user machine
* Can send data to the server
* Can receive data from the server
* Can receive data from the lead machine
* Can receive data to the user machine
* Knows the IP address of the server
* Knows a list of all current server connections from client machines
* Can create a server port to accept connections
* Can send data to connected client machines
* Can receive data from connected client machines
* Can store received data to a system datastore
* Can retrieve data from a system datastore
* Can display event configuration information
* Can modify the information in an event configuration
* Can display Vector Manager information
* Can modify Vector Manager information
* Can display Log File Manager information
* Can display Enforcement Action Report Manager Information
* Can modify Enforcement Action Report Manager information
* Can display Log Entry Manager information
* Can modify Log Entry manager information
* Can display vector database information
* Can modify vector database information
* Can display Graph information
* Can modify Graph information
* Can display Icon Manager information
* Can modify Icon Manager information
* Can display Vector Information
* Can modify Vector Information

# 4. CRC Cards

In this section, we describe the CRC cards of all the classes. A CRC card contains a class name, a class description, the superclasses of the class, the subclasses of a class, the responsibilities of the class, and the collaborations of the class.

## 4.1 Event Configuration

|  |  |
| --- | --- |
| **Class Name:** Event Configuration | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: A component of the system to be produced that will allow the analysts to define elements of the assessment. | |
| **Responsibilities**:   1. Knows the name of the event 2. Knows the start timestamp of an event 3. Knows the end timestamp of an event 4. Knows the path to the root directory of an event 5. Knows the name of the red team folder 6. Knows the name of the blue team folder 7. Knows the name of the white team folder 8. Knows whether or not the current user is the lead 9. Knows the IP address of the lead 10. Knows the number of connections established to the lead 11. Store all event configuration information in a system datastore 12. Retrieve all event configuration from a system datastore 13. Validate directory structure 14. Validate directory existence 15. Perform data cleansing 16. Perform data ingestion | **Collaborations**:   1. Responsibility 11 collaborates with Responsibility 5 from the Client Handler class 2. Responsibility 12 collaborates with Responsibility 6 in the Client Handler class |

## 4.2 Log File

|  |  |
| --- | --- |
| **Class Name:** Log File | |
| **Superclass**: N/A **Subclass**: Audio Log File, Video Log File, Image Log File, PDF Log File  **Description**: The source log files that the analysts will provide to the system to be cleansed and ingested. After that process, the output will be a series of log entries. | |
| **Responsibilities**:   1. Knows the file name of the log file 2. Knows the date and time it was most recently updated 3. Knows if the file has been cleansed 4. Knows if the file has been validated, and if so, whether it was successful or not 5. Knows if the file has been ingested into the system database 6. Knows if a user accepts the log file into the system in the event it’s invalid 7. Cleanse a textual log file 8. Validate a textual log file 9. Ingest a textual log file | **Collaborations**:  1. Responsibility 9 collaborates with Responsibility 1, 2 from the Splunk Interface class. |

## 4.3 Log File Manager

|  |  |
| --- | --- |
| **Class Name:** Log File Manager | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: A tool used to manage log files. | |
| **Responsibilities**:   1. Knows all log files created. 2. Create a new log file 3. Store log files in a local data store 4. Retrieve log files from a local data store 5. Delete an existing log file | **Collaborations**: |

## 4.4 Enforcement Action Report

|  |  |
| --- | --- |
| **Class Name:** Enforcement Action Report | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: A report to be generated when a log file cannot be validated and shows any inaccurate data within that log file. | |
| **Responsibilities**:   1. Knows the line number where an error occurred in a log file 2. Knows the error message explaining why a log file fails the validation test 3. Accept invalid log files as valid 4. Reject invalid log files | **Collaborations**:   1. Responsibility 2 collaborates with Responsibility 8 from the Log File Class 2. Responsibility 3 collaborates with Responsibility 3 from the Log File Manager class |

## 4.5 Enforcement Action Report Manager

|  |  |
| --- | --- |
| **Class Name:** Enforcement Action Report Manager | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: A tool used to manage enforcement action reports. | |
| **Responsibilities**:   1. Knows all enforcement action reports created 2. Create a new enforcement action report 3. Modify an existing enforcement action report 4. Store enforcement action reports in a local data store 5. Retrieve enforcement action reports from a local datastore 6. Delete an existing enforcement action report | **Collaborations**: |

## 4.6 Vector

|  |  |
| --- | --- |
| **Class Name:** Vector | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: Created in the event configuration with just a name and a description, but after the analyst associates log entries to the vector and correlates nodes together, the collection of log entries in a vector can be used to describe some adversarial event or story between the blue and red team. | |
| **Responsibilities**:   1. Knows the user-provided name of the vector 2. Knows the user-provided description of the vector 3. Knows the list of log entries that have been associated with it. 4. Knows the list of nodes that make up the vector 5. Create a new node 6. Modify an existing node 7. Delete an existing node 8. Knows the list of relationships between nodes in the vector. 9. Create a new relationship 10. Modify an existing relationship 11. Delete an existing relationship 12. Export the vector information in tabular format | **Collaborations**:   1. Responsibility 5 collaborates with Responsibility 8 from the Log Entry Manager class |

## 4.7 Log Entry

|  |  |
| --- | --- |
| **Class Name:** Log Entry | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: A record of an action made by a member of the red, white, or blue team. Log entries are the result of a log file being validated and ingested into the database within the system. | |
| **Responsibilities**:   1. Knows the log entry number 2. Knows the log entry timestamp 3. Knows the log entry contents 4. Knows the host IP address 5. Knows the source log file 6. Knows the source type | **Collaborations**: |

## 4.8 Node

|  |  |
| --- | --- |
| **Class Name:** Node | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: The visual representation of a particular significant log entry on the graph. Shown with an icon that should represent the type of event and is correlated with other nodes with connectors. | |
| **Responsibilities**:   1. Knows the node ID 2. Knows the node name 3. Knows the node timestamp 4. Knows the node description 5. Knows the log entry reference 6. Knows the log entry information of the log entry reference 7. Knows the node’s icon information 8. Knows the node’s position on the graph 9. Knows the visibility of the node’s ID on the graph 10. Knows the visibility of the node’s name on the graph 11. Knows the visibility of the node’s timestamp on the graph 12. Knows the visibility of the node’s description on the graph 13. Knows the visibility of the node’s log entry reference on the graph 14. Knows the visibility of the node’s event type on a graph 15. Knows the visibility of the node’s icon on a graph 16. Knows the visibility of the node’s source on a graph 17. Knows the node’s visibility on a graph | **Collaborations**:   1. Responsibility 6 collaborates with Responsibilities 1, 2, 3, 4, 5, 6 in the Log Entry class 2. Responsibility 7 collaborates with Responsibilities 1, 2 in the Icon class |

## 4.9 Icon

|  |  |
| --- | --- |
| **Class Name:** Icon | |
| **Superclass**: N/A **Subclass**: N/A  Description: An icon is the visual representation of a node on a graph and is correlated with other nodes via arrow-head connectors. | |
| **Responsibilities**:   1. Knows the name of the icon 2. Knows the file path of the icon image | **Collaborations**: |

## 4.10 Graph

|  |  |
| --- | --- |
| **Class Name:** Graph | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: The visual representation of a single given vector and its related nodes and connectors. | |
| **Responsibilities**:   1. Knows the list of nodes that make up the graph 2. Knows the list of relationships that make up the graph 3. Export the nodes and relationships as an image. 4. Edit the positions of the nodes. 5. Associate nodes together as relationships | **Collaborations**:   1. Responsibility 1 collaborates with Responsibility 4 from the Vector class 2. Responsibility 2 collaborates with Responsibility 8 from the Vector class 3. Responsibility 4 collaborates with Responsibility 6 from the Vector class 4. Responsibility 5 collaborates with Responsibility 9 from the Vector class |

## 4.11 Audio Log File

|  |  |
| --- | --- |
| **Class Name:** Audio Log File | |
| **Superclass**: Log File **Subclass**: N/A  **Description**: A type of log file that will be transcribed into a log file to be cleansed and ingested. | |
| **Responsibilities**:   1. Cleanse an audio log file 2. Validate an audio log file 3. Ingest an audio log file | **Collaborations**:  1. Responsibility 3 collaborates with Responsibility 1, 2 from the Transcription Tool Interface class. |

## 4.12 Video Log File

|  |  |
| --- | --- |
| **Class Name:** Video Log File | |
| **Superclass**: Log File **Subclass**: N/A  **Description**: A type of log file that will have its audio extracted and then transcribed into a log file to be cleansed, validated, and ingested. | |
| **Responsibilities**:   1. Cleanse a video log file 2. Validate a video log file 3. Ingest a video log file | **Collaborations**:  1. Responsibility 3 collaborates with Responsibility 1, 2 from the Transcription Tool Interface class. |

## 4.13 Relationship

|  |  |
| --- | --- |
| **Class Name:** Relationship | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: The association between a parent and child node within a vector. Is visually represented on a graph with a single arrow pointer. | |
| **Responsibilities**:   1. Knows the relationship ID of the relationship 2. Knows the ID of the parent node of the relationship 3. Knows the ID of the child node of the relationship 4. Knows the relationship label | **Collaborations**:   1. Responsibilities 2, 3 collaborate with Responsibility 1 of the Node class |

## 4.14 Vector Database

|  |  |
| --- | --- |
| **Class Name:** Vector Database | |
| **Superclass**: N/A **Subclass**: Lead Vector Database, User Vector Database  **Description**: A database used to manage all known vectors. | |
| **Responsibilities**:   1. Knows a list of vectors 2. Store vectors in a system or local datastore 3. Retrieve vectors from a system or local datastore 4. Create a new vector 5. Modify an existing vector 6. Delete an existing vector | **Collaborations**:   1. Responsibility 2 collaborates with Responsibility 5 in the Client Handler 2. Responsibility 3 collaborates with Responsibility 6 in the Client Handler |

## 4.15 Lead Vector Database

|  |  |
| --- | --- |
| **Class Name:** Lead Vector Database | |
| **Superclass**: Vector Database **Subclass**: N/A  **Description**: A database used to manage all known vectors. The lead will have the ability to accept or deny any changes to the vector database. Additionally, the lead vector database will have more access than the user vector database. | |
| **Responsibilities**:   1. Knows a list of vectors 2. Store vectors in a system datastore 3. Create a new vector 4. Modify an existing vector 5. Delete an existing vector 6. Knows a list of pushed vector databases 7. Accept a pushed vector database 8. Reject a pushed vector database 9. Merge an accepted vector database | **Collaborations**: |

## 4.16 User Vector Database

|  |  |
| --- | --- |
| **Class Name:** User Vector Database | |
| **Superclass**: Vector Database **Subclass**: N/A  **Description**: A database used to manage all known vectors. A user will be able to make modifications to a vector and can push or pull from the lead vector database. | |
| **Responsibilities**:   1. Knows a list of vectors 2. Store vectors in a local datastore 3. Create a new vector 4. Modify an existing vector 5. Delete an existing vector 6. Push to the lead vector database 7. Pull from the lead vector database | **Collaborations**: |

## 4.17 Image Log File

|  |  |
| --- | --- |
| **Class Name:** Image Log File | |
| **Superclass**: Log File **Subclass**: N/A  **Description**: An image that will have its text extracted and stored within a log file to be cleansed, validated, and ingested. | |
| **Responsibilities**:   1. Cleanse an image log file 2. Validate an image log file 3. Ingest an image log file | **Collaborations**:  1. Responsibility 3 collaborates with Responsibility 1, 2 from the OCR Tool Interface class. |

## 4.18 PDF Log File

|  |  |
| --- | --- |
| **Class Name:** PDF Log File | |
| **Superclass**: Log File **Subclass**: N/A  **Description**: A PDF that will be converted to a log file to be cleansed, validated, and ingested. | |
| **Responsibilities**:   1. Cleanse a PDF log file 2. Validate a PDF image log file 3. Ingest a PDF image log file | **Collaborations**:  1. Responsibility 3 collaborates with Responsibility 1, 2 from the OCR Tool Interface class. |

## 4.19 Log Entry Manager

|  |  |
| --- | --- |
| **Class Name:** Log Entry Manager | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: A tool used to manage log entries. | |
| **Responsibilities**:   1. Knows a list of searched log entries. 2. Create a log entry 3. Delete an existing log entry 4. Store log entries in a system data store 5. Edit an existing log entry 6. Search system data store for log entries 7. Sort log entries 8. Associate a log entry to a vector | **Collaborations**:   1. Responsibility 2 collaborates with Responsibility 9 from the Log File class 2. Responsibility 4 collaborates with Responsibility 5 from the Client Handler class 3. Responsibility 6 collaborates with Responsibility 6 from the Client Handler class |

## 4.20 Icon Manager

|  |  |
| --- | --- |
| **Class Name:** Icon Manager | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: A tool used to manage icons. | |
| **Responsibilities**:   1. Knows a list of all icons created 2. Create new icons 3. Delete an existing icon 4. Modify an existing icon 5. Store icons in a system datastore 6. Retrieve icons from a system datastore | **Collaborations**:   1. Responsibility 2, 3, 4 collaborate with Responsibility 2 from the Icon Configuration class 2. Responsibility 5 collaborates with Responsibility 9 from the Client Handler class 3. Responsibility 6 collaborates with Responsibility 6 from the Client Handler class |

## 4.21 Client Handler

|  |  |
| --- | --- |
| **Class Name:** Client Handler | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: A tool sitting on the server side that handles the communication between the server and the client. | |
| **Responsibilities**:   1. Knows the IP address of the lead machine 2. Knows the IP address of the server 3. Knows the IP address of a user machine 4. Create a local network connection from the current machine to the server 5. Process store data request 6. Process get data request from 7. Send serialized data to server 8. Receive serialized data from server | **Collaborations**:   1. Responsibility 5 collaborates with Responsibility 6 from the Server Handler class 2. Responsibility 6 collaborates with Responsibility 7 from the Server Handler class |

## 4.22 Server Handler

|  |  |
| --- | --- |
| **Class Name:** Server Handler | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: A tool sitting on the client side that handles the communication between the server and the client. | |
| **Responsibilities**:   1. Knows the IP address of the server 2. Knows a list of all current server connections from client machines 3. Create a server port to accept connections 4. Send serialized data to connected client machines 5. Receive serialized data from connected client machines 6. Store received serialized data to a system datastore 7. Retrieve serialized data from a system datastore | **Collaborations**: |

## 4.23 Event Configuration Window

|  |  |
| --- | --- |
| **Class Name:** Event Configuration Window | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: Allows you to manage an event configuration. | |
| **Responsibilities**:   1. Display event configuration information 2. Modify the information in an event configuration | **Collaborations**:   1. Responsibility 1 collaborates with Responsibilities 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 from the Event Configuration class |

## 4.24 Vector Configuration

|  |  |
| --- | --- |
| **Class Name:** Vector Configuration | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: Allows you to manage a vector configuration. | |
| **Responsibilities**:   1. Display Vector Manager information 2. Modify Vector Manager information | **Collaborations**:   1. Responsibility 1 collaborates with Responsibility 1 from the Vector class |

## 4.25 Log File Configuration

|  |  |
| --- | --- |
| **Class Name:** Log File Configuration | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: Allows you to manage a log file configuration. | |
| **Responsibilities**:   1. Display Log File Manager information 2. Display Enforcement Action Report Manager Information 3. Modify Enforcement Action Report Manager information 4. Modify Log File Manager Information | **Collaborations**:   1. Responsibility 1 collaborates with Responsibility 1 from the Log File Manager 2. Responsibility 2 collaborates with Responsibility 1 from the Enforcement Action Report Manager Class |

## 4.26 Log Entry Configuration

|  |  |
| --- | --- |
| **Class Name:** Log Entry Configuration | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: Allows you to manage a log entry configuration. | |
| **Responsibilities**:   1. Display Log Entry Manager information 2. Modify Log Entry manager information | **Collaborations**:   1. Responsibility 1 collaborates with Responsibility 1, 6 from the Log Entry Manager class |

## 4.27 Vector Db Configuration

|  |  |
| --- | --- |
| **Class Name:** Vector DB Configuration | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: Allows you to manage a vector database configuration. | |
| **Responsibilities**:   1. Display vector database information 2. Modify vector database information | **Collaborations**:   1. Responsibility 1 collaborates with Responsibility 1 from the Vector Database class |

## 4.28 Graph Configuration

|  |  |
| --- | --- |
| **Class Name: Graph Configuration** | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: Allows you to manage a graph configuration. | |
| **Responsibilities**:   1. Display Graph information 2. Modify Graph information | **Collaborations**:   1. Responsibility 1 collaborates with Responsibilities 1, 2 from the Graph class |

## 4.29 Icon Configuration

|  |  |
| --- | --- |
| **Class Name:** Icon Configuration | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: Allows you to manage an icon configuration. | |
| **Responsibilities**:   1. Display Icon Manager information 2. Modify Icon Manager information | **Collaborations**:   1. Responsibility 1 collaborates with Responsibility 1 in the Icon Manager class |

## 4.30 Vector Table Configuration

|  |  |
| --- | --- |
| **Class Name:** Vector Table Configuration | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: Allows you to manage a vector table configuration. | |
| **Responsibilities**:   1. Display Vector Information 2. Modify Vector Information | **Collaborations**:   1. Responsibility 1 collaborates with Responsibilities 1, 2, 3, 4, 8 from the Vector class |

## 4.31 Splunk Interface

|  |  |
| --- | --- |
| **Class Name:** Splunk Interface | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: Coordinate with Splunk to ingest log entries. | |
| **Responsibilities**:  1. Send log files to Splunk for ingestion  2. Retrieve ingested log entries from Splunk. | **Collaborations**: |

## 4.32 ` OCR Tool Interface

|  |  |
| --- | --- |
| **Class Name:** OCR Tool Interface | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: Coordinate with the OCR tool to ingest log entries. | |
| **Responsibilities**:  1. Send log files to the OCR tool for ingestion  2. Retrieve ingested log entries from the OCR tool. | **Collaborations**: |

## 4.33` Transcription Tool Interface

|  |  |
| --- | --- |
| **Class Name:** Transcription Tool Interface | |
| **Superclass**: N/A **Subclass**: N/A  **Description**: Coordinate with the transcription tool to ingest log entries. | |
| **Responsibilities**:  1. Send log files to the transcription tool for ingestion  2. Retrieve ingested log entries from the transcription tool. | **Collaborations**: |

$